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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,259	01/18/2000	David Coates	MERCK1883-C1	9483

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT PAPER NUMBER

2871

DATE MAILED: 08/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/484,259

Applicant(s)

COATES ET AL.

Examiner

Tarifur R Chowdhury

Art Unit

2871

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 9-13 and 15-29 is/are pending in the application.
- 4a) Of the above claim(s) 12, 13, 17-19 and 21-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-11, 15, 16 and 20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 12, 13, 17, 18 and 21-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 15.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 4, 9-11, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Krueger et al., (Krueger), USPAT 4,112,157.

4. Krueger discloses in the abstract, a liquid crystal film or layer with homeotropic alignment, wherein the homeotropic alignment is achieved by an aligning layer on a substrate, and wherein the aligning layer is a smooth Al_2O_3 layer.

Accordingly, claims 1, 11, 15 and 16 are anticipated.

Per claim 4, the substrate being subjected to corona discharge recitation is a product by process limitation. Regarding product by process limitations, see MPEP 2113.

Per claim 9, since the method of manufacturing the device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

Per claim 10, claim 10 adds no new positively recited limitations.

5. **Claim 1, 4, 9-11, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Bahadur (LIQUID CRYSTALS APPLICATIONS AND USES, vol. III, pgs 1-36).**

6. Per claims 1, 11, 15 and 16, Bahadur discloses a liquid crystal film or layer with homeotropic alignment (see Fig. 5.13c) characterized that the homeotropic alignment is achieved by an aligning layer on a substrate (see Fig. 5.13c) and the aligning layer is an inorganic layer (the aligning layer is SiO or Al or Al_2O_3 , see Fig. 5.13 description and table 5.3).

Per claim 4, the substrate being subjected to corona discharge recitation is a product by process limitation. Regarding product by process limitations, see MPEP 2113.

Per claim 9, since the method of manufacturing the device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

Per claim 10, claim 10 adds no new positively recited limitations.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claims 2, 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krueger or Bahadur as applied to claims 1, 4, 9-11, 15 and 16 above.**

10. Krueger and Bahadur disclose the claimed invention, as described above, except for the substrate formed of polymeric or plastic material. However, it is well known to

incorporate plastic substrates in liquid crystal displays. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate a plastic substrate in the liquid crystal alignment film of Bahadur or Krueger since it is well known for the benefit of increase display flexibility.

Response to Arguments

11. Applicant's arguments filed *02/26/02 have been fully considered but they are not persuasive.

In response to applicant's argument regarding Krueger, it is respectfully pointed out to applicant that, Applicant has not recited any limitations that would comprise the characteristics/properties of smoothness, for example "degree of smoothness". Furthermore, typically the alignment layers are smooth unless disclosed otherwise.

Further, applicant's argument regarding references Scherer and Kato were persuasive and thus the rejections based on the references are withdrawn.

Conclusion

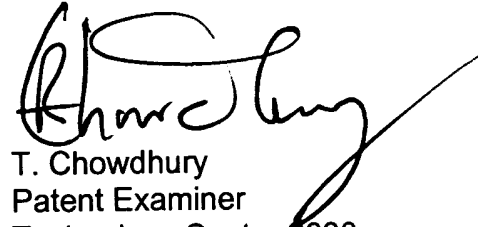
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Art Unit: 2871

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

August 15, 2002



T. Chowdhury
Patent Examiner
Technology Center 2800